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Justice and the Politics of Climate Change

Derek Bell

Introduction

In 2007 the Intergovernmental Panel on Climate Change (IPCC) reported that the evidence for 'warming of the climate system is now unequivocal' and that its causes were 'very likely' (with a probability of more than 90 percent) due to human action which had increased greenhouse gases in the atmosphere. If 'business as usual' continued further, warming of between 1.7 and 6.4 degrees would be 'likely' by the end of the century with significant impacts on ecosystems and on the health, welfare and indeed survival of millions of humans. (IPCC 2007:27, 30, 39, 45, 48. For a fuller description of the IPCC findings see Chapter 1 in this volume by Barry Pittock).

In short, human emissions of greenhouse gases will cause (and have already caused[i]) harm to other humans. It is a standard commitment of liberal democratic societies that it is immoral and unjust for one person to harm another person. Therefore, global climate change should be understood as a moral problem or a problem of justice. In the first section of this paper, I will defend this claim. In particular, I will argue that conventional economic approaches to climate change are inappropriate because they do not take justice seriously. If climate change is a problem of justice, we will only be able to solve the problem by developing and implementing principles of 'climate justice'.

In the second section of the paper, I consider the role of principles of climate justice in the main international agreement on climate change. I identify the principle of 'common but differentiated responsibilities' (CBDR) as the key principle for allocating climate-related duties in international climate politics. In section three, I draw on the recent discussions of climate justice in political philosophy to examine the two main principles that are constitutive of the 'common but differentiated responsibilities' (CBDR) principle – namely, the historic emitter pays principle and the ability to pay principle.

In section four, I consider three different ways that these two principles might be combined and I argue that only one of these – proposed by Simon Caney – is plausible. In section five, I critically consider Caney's hybrid principle for allocating climate duties and defend an alternative hybrid principle. The proposed principle might be understood as a

critical interpretation of the 'common but differentiated responsibilities' (CBDR) principle. Finally, I re-state the proposed principle and identify further work that needs to be done to develop a fuller conception of climate justice that can be operationalized.

Economics or justice?

The dominant approach to assessing how we should respond to climate change in the policy arena is cost-benefit analysis. This reflects the dominance of the discipline of economics in policy-making and the centrality of cost benefit analysis in economics. (But see also chapter by Lawn in this volume).As Eric Neumayer has suggested in relation to the Stern Review on the economics of climate change, 'It had to do some kind of cost benefit analysis … as otherwise it would have lost all credibility among mainstream economists' (Neumayer 2007: 299).

Both advocates and opponents of urgent climate action have used cost benefit analysis to support their positions. Bjorn Lomborg has famously employed it to argue against 'heroic CO_2 cuts' (Lomborg 2001: 306). While the Stern Review has (even more) famously employed it to argue for immediate action to tackle climate change (Stern 2007). Cost benefit analysis 'proceeds by comparing the costs (and any benefits) associated with anthropogenic climate change with the costs and any benefits of a programme for combating climate change' (Caney 2009a: 1). It is the central feature of an 'ecological modernization' – or, more generally, an 'economistic' – approach to climate change. Ecological modernization 'understands environmental pollution as economic inefficiency' (Oels 2005: 196). So, climate change – like other environmental problems – is understood as an economic problem. If so the solution is to apply economic methods to the problem to design an effective solution. The most important method is cost benefit analysis:

> [Ecological] modernization, first and foremost, introduces concepts that make issues of environmental degradation calculable. Most notably, ecological modernization frames environmental problems combining monetary units with discursive elements derived from the natural sciences. This provides a common denominator through which costs and benefits of pollution can be taken into account (Hajer 1995: 26).

Cost benefit analysis monetizes the costs and benefits of alternative policy responses, including business-as-usual, and then aggregates those monetary values to identify an economically optimum response.

The conception of climate change as an economic problem of inefficiency, requiring an economic solution is challenged by the conception of it as an injustice. The economic approach – and cost benefit analysis as the central economic method – is grounded in a utilitarian ethical theory, which does not recognise the idea of injustice. As Dietz *et al*. recognise:

> [Standard welfare economics] looks only at the consequences of actions (consequentalism) for the welfare or 'utility' of individuals in a community (perhaps most accurately described as welfarism), where utility is derived from the consumption of goods and services (assuming utility can be measured by the strength of everyone's preferences and these preferences can be described by the same utility function) (Dietz *et al.* 2007: 5).

Critics argue that utilitarianism – and welfare economics – suffers from two major ethical flaws. First, it treats all preferences – and, therefore all costs and benefits – alike:

> For standard economic analysis everything is a preference: the epicure's wish for a little more seasoning and the starving child's wish for a little more water, the collector's wish for one more painting and the homeless person's wish for privacy and warmth, all are preferences. Quantitatively, they are different because some are backed up by a greater 'willingness to pay' than others, but qualitatively a preference is a preference (Shue 1993: 55).

This form of economic – or welfarist – reductionism assumes an undiscriminating conception of the good as preference-satisfaction (Barry 1995: 159). However, as Henry Shue (and many others) have argued:

> Some so-called preferences are vital, and some are frivolous. Some are needs, and some are mere wants (not needs). The satisfaction of some 'preferences' is essential for survival, or for human decency, and the satisfaction of others is inessential for either survival or decency (Shue 1993: 55).

Shue's point is that it is a moral error to think that the relative importance of needs and wants or the vital and the frivolous can be measured in a single metric – namely, the intensity of preferences as expressed by how much money we are willing to pay to satisfy them. Needs – or what is essential for survival or decency – are not commensurable with 'mere wants'. The 'essence of cost-benefit analysis is to refigure citizens [or, perhaps humans] as consumers' (Barry 1995: 154). The economic conception of humans as nothing other than consumers is an immoral distortion of human nature, which makes it possible for us to allow trade-offs between needs and wants.

The second problem with utilitarianism – and cost benefit analysis – is that it 'aggregates the costs and benefits felt by individuals and then selects the policy that maximises the good' (Caney 2009a: 11). As Caney points out 'It has long been recognized that one implication of this kind of aggregative consequentialist approach is that it could call for outcomes in which some suffer greatly but their disutility is outweighed by enormous benefits to others' (Caney 2009a: 11).

Economic reductionism conceives of all costs and benefits in terms of a single metric – namely, money. Aggregation requires us to adopt the policy that produces the maximum monetary value. It ignores 'the distinction between persons', thereby 'conflating all persons into one' (Rawls 1999: 24). Together, these two features of cost benefit analysis allow the (frivolous) wants of a large number of people to be weighed against – and even to outweigh – the (vital) needs of others. In the context of climate change, the wants of the already affluent for luxuries that require high greenhouse gas emissions are weighed against the needs of others for food, water, protection from disease and protection from extreme weather events.

The outcome of climate change cost benefit analysis is contested by Stern, Lomborg and others. However, the whole approach is morally flawed. It is unjust even to consider causing one person to be deprived of those things that are essential for survival or human decency for the sake of providing luxuries (or even necessities) to any number of others. In other words, justice requires that we reject the economic approach to climate change and adopt a justice or rights-based approach. The justice approach demands that each individual's 'fundamental interests' are not sacrificed for the sake of the interests (either fundamental or trivial) of others (Caney 2006a: 259).

In summary, I have argued that climate change should be understood as a problem of justice rather than (merely) a problem of economics. It is a problem of justice because the emission of greenhouse gases threatens fundamental human interests, which (*contra* cost

benefit analysis) should not be treated as just one cost among many to be traded off in a utilitarian calculation. Instead, we should treat those fundamental interests as providing a 'side-constraint' that must be respected in our policies and our actions (Nozick 1974: 29).

Climate justice in the United Nations Framework Convention on Climate Change.

The United Nations Framework Convention on Climate Change does conceptualise climate change as a problem of justice. Its 'ultimate objective' is to 'prevent dangerous anthropogenic interference with the climate system' (UN 1992: 4). It suggests that such interference should be prohibited, not that we should weigh the (monetized) costs and benefits of different greenhouse gas emission policies, and adopt the policy that maximises net benefits. Rather we are required to adopt a policy that respects the prohibition on such interference.

The treaty also suggests that 'anthropogenic interference with the climate system' should be understood as 'dangerous' if ecosystems are unable to 'adapt naturally to climate change', food production is 'threatened' or if it prevents 'economic development … [proceeding] in a sustainable manner' (UN 1992: 4). This might plausibly be interpreted as suggesting that humans have fundamental interests in: living in resilient ecosystems; having sufficient food to prevent malnutrition; and in sustainable economic development. In other words, these interests should be regarded as rights.

A theory of justice has two elements – namely, an account of rights and an account of the correlative duties. For example, if there is a right to live in resilient ecosystems, there must also be a correlative duty not to cause the resilience of ecosystems to be exceeded (e.g., by emitting greenhouse gases that cause climate change). More generally, we might understand the United Nations Framework Convention on Climate Change as suggesting that there is a duty to 'protect the climate system' (UN 1992: 4). However, this raises the interesting problem of how that duty should be divided among different duty-bearers. Or, to put it another way, who should pay the costs of protecting the climate system and preventing dangerous climate change? The framework convention also offers an answer. 'The Parties should protect the climate system … on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities' (UN 1992: 4).

This has become known as the principle of 'common but differentiated responsibilities'. It has three key elements. First, 'it establishes unequivocally the common responsibility of States to protect the global environment' (Rajamani 2000: 121). Dangerous

climate change is a global problem – with global causes and effects – that can only be prevented through global co-operation. Therefore, no state can be exempt from the duty to co-operate with a global climate regime.

Second, 'common but differentiated responsibilities' requires states to pay 'in accordance with their differentiated responsibilities'. Those states that have contributed more to the problem of climate change – through higher historic greenhouse gas emissions – should pay more towards the costs of protecting the climate system. They have caused the problem (i.e., the increased risk of dangerous climate change), therefore, they should solve the problem. We might call this the historic emitter pays principle.

Third, 'common but differentiated responsibilities' requires states to pay 'in accordance with … their respective capabilities'. Those wealthier states that are most able to bear the costs should pay more. We might call this the ability to pay principle. 'Common but differentiated responsibilities' is a pluralistic or 'hybrid' principle, which suggests that all states bear a common responsibility for protecting climate-related rights but that how much each state should pay depends on both their historic emissions and their ability to pay.[ii]

In summary, I have suggested that the United Nations Framework Convention on Climate Change adopts a conception of climate change as a problem of justice and endorses three human rights and a hybrid principle for allocating climate duties. In the remainder of this paper, I will offer a more detailed critical interpretation and assessment of the convention's principle for allocating climate duties – the principle of 'common but differentiated responsibilities'. I focus on duties rather than on rights for two reasons.[iii] First, it is the debate about the allocation of duties that has received most attention in the growing political philosophy literature on climate justice. Second, it is the debate about the allocation of duties that is the focus of international negotiations on climate change.

The historic emitter pays principle and the ability to pay principle.

We might usefully begin our discussion of the 'common but differentiated responsibilities' principle by examining each of its constituent principles for allocating climate duties – the historic emitter pays principle and the ability to pay principle – in more detail. As Caney notes, the historic emitter pays principle has 'considerable intuitive appeal':

> In everyday situations we frequently think that if someone has produced a harm (they have spilled rubbish on the streets, say) then they should rectify that situation. They as the causers are responsible for the ill-effects (Caney 2005: 752).

Moreover, the historic emitter pays principle 'follows from the principle, articulated by Rawls and others, that persons should take responsibility for their actions and their ends' (Caney 2009b, 13). The historical emitter pays principle follows from the key liberal commitment that freedom comes with responsibility – agents should be held to account for their own choices. If they have chosen to emit greenhouse gases, they should be held responsible for the consequences of their actions.

However, it might be objected that a single agent's greenhouse gas emissions do not harm anyone. As Margaret Moore has suggested:

> [Even] if I drive a large SUV, which is far beyond what I need to get to work every day, the pollution generated, by itself, doesn't cause global warming. The carbons emitted by me do not cause any harm, by themselves. The problem arises not because of my actions, but because millions of people like me, live a lifestyle that involves greenhouse gas emissions, and it is our uncoordinated individual action[s], which, together, cause harm to the environment (Moore 2008: 504).

The harms of climate change are 'accumulative harms' (Feinberg 1984: 225). They are the consequence of the cumulative actions of many agents. One agent's actions would not be enough.

The most common response to this problem is to suggest that we adopt a principle of proportionate responsibility:

> One might … reconstruct the [historic emitter pays principle] to mean … that if actors X, Y, and Z perform actions which together cause pollution, then they should pay for the cost of the ensuing pollution in proportion to the amount of pollution that they have caused (Caney 2005: 753).

Each agent should pay a share of the costs of climate change that is proportionate to their share of global emissions[iv]). This may seem intuitively plausible but it oversimplifies the situation. The proportionate responsibility claim is only the most plausible principle for

dividing costs if the total harm is a 'linear function of the total contribution' (Kernohan 2000: 349). However, the relationship between emissions and the harms of climate change is non-linear in, at least, one important respect. There is a threshold of greenhouse gas concentrations below which climate change is not dangerous (i.e., does not cause any morally relevant harms). So, a graph of harm versus emissions will 'start horizontally from the origin … [and] begin to rise at the [safe/dangerous] threshold' (Kernohan 2000: 349).

If there is a safe global level of emissions, we might allocate those safe emissions fairly among agents. If all agents generate no more than their fair share of safe emissions, the safe global level will not be exceeded and there will be no harms of climate change. We might plausibly suggest that the responsibility for climate change should be attributed only to those agents who have emitted more than their fair share of emissions. The class of unfair polluters should pay the costs of climate change. If the relationship between emissions and harms above the safe threshold is linear, unfair polluters should pay the costs of climate change in proportion to their share of global unsafe emissions. We might call this the unfair historic emitter pays principle.

The distinction between the historic emitter pays principle and the unfair historic emitter pays principle is not always clearly articulated in the literature but many of the leading theorists (and policy advocates) subscribe to a version of the latter.[v] This principle is attractive because it requires only that those who have acted unfairly pay the costs. We should note, however, that if we accept the unfair polluter pays principle as an account of who should pay the costs of climate change, we will need a prior account of the fair distribution of emission permits (or permissions to emit greenhouse gases). An account of the fair distribution of emission permits tells us what we are permitted to do without violating our duties to the potential victims of climate change. An account of who should pay the costs – such as the unfair historic emitter pays principle – tells us what unfair emitters should do to rectify the wrong that they have done in generating unfair emissions.

I will not address the problem of determining a fair allocation of permissions to emit greenhouse gasses in detail in this chapter. I have argued elsewhere that we should reject the claim that the obvious and only fair principle for allocating emission permits is 'carbon egalitarianism' – i.e., there is a universal human right to equal greenhouse gas emissions (Bell 2008).[vi] Instead, an account of the fair allocation of permissions to emit greenhouse gas should be derived from an account of the relationship between greenhouse gas emitting activities and other more fundamental human interests (or rights) that should be protected. For example, if there is a human right to subsistence, all humans should be entitled to the

quantity of greenhouse gas emission permits necessary for them to achieve subsistence. If this varies between different places and different times, we should not expect a fair allocation of emission permits to be an equal allocation.[vii]

In very general terms, the implications of the unfair historic emitter pays principle are relatively clear even without a detailed account of the fair allocation of greenhouse gas emissions. The developed states – and many of the individuals living in them – are very likely to have emitted more than their fair share during the last two hundred and fifty years. The developing states – and most of the individuals living in them – are very likely to have emitted less than their fair share of emissions during the same period. Therefore, the unfair historic emitter pays principle suggests that the developing states – as fair emitters – should not pay anything toward the costs of climate change and the developed states – as unfair emitters – should share the costs of climate change among themselves in proportion to each state's share of the global total of unfair emissions.

The second principle that is constitutive of 'common but differentiated responsibilities' is the ability to pay principle. Shue suggests that the ability to pay principle is 'widely accepted as a requirement of simple fairness': Among a number of parties, all of whom are bound to contribute to some common endeavour, the parties who have the most resources normally should contribute the most to the endeavour (Shue 1999: 537).

The ability to pay principle might require that only those above a threshold level of wealth should pay at all. In addition, the ability to pay principle might require a 'progressive rate of payment: insofar as a party's assets are greater, the rate at which the party should contribute to the enterprise in question also becomes greater' (Shue 1999: 537). As Shue suggests:

> [The] progressivity [might] … be strictly proportional – those with double the base amount of assets contribute at twice the rate at which those with the base amount of assets contribute, those with triple the base amount of assets contribute at three times the rate at which those with the base amount of assets contribute, and so on (Shue 1999: 537).

Alternatively, the progressivity might be less than strictly proportional (i.e. double assets implies less than double rate) or more than strictly proportional (i.e., double assets imply more than double rate). A threshold interpretation of the principle might be combined with a requirement that those above the threshold should pay a progressive rate contribution.

Shue suggests that the ability to pay principle is 'sufficiently fundamental that it is not necessary, and perhaps not possible, to justify it by deriving it from considerations that are more fundamental still' (Shue 1999: 537). However, he does point out that requiring flat contributions 'focuses exclusively upon the contribution process and ignores the position in which, as a result of the process, the parties end up. Contribution according to ability to pay is much more sensitive both to concrete circumstances and to final outcome' (Shue 1999: 537).

Shue's concerns about 'concrete circumstances' and 'final outcome' suggest that underlying the ability to pay principle is some version of an egalitarian theory of justice. We should require the better off to pay more toward the costs of tackling climate change because otherwise we will exacerbate existing inequalities.

If we require the better off to pay more, we reduce inequality and promote a more egalitarian distribution of resources. Some versions of the ability to pay principle will be consistent with a 'weak egalitarianism' or a (relatively) weak aversion to inequality (e.g., a relatively low threshold with gently progressive contributions above the threshold) while others will reflect a stronger aversion to inequality (e.g., a relatively high threshold with steeply progressive contributions above the threshold). In general, the ability to pay principle reflects the commitment of many contemporary liberals to equality of resources – or, at least, their commitment to oppose radical inequalities of resources.

The implications of the ability to pay principle in the case of climate change will depend upon which version of the principle we endorse. However, we can expect that the developed states, which are wealthier, would be required to pay more of the costs of climate change than the developing states, which are poorer. The relative contributions of the two groups – and each state (or even each individual person) – would depend on: the level of wealth threshold below which contributions were not required; and the progressive rates we apply above that threshold.

In this section, I have considered separately the two principles for allocating costs that are constitutive of the 'common but differentiated responsibilities' principle. I have argued that we should re-formulate the historic emitter pays principle as the unfair historic emitter pays principle. This is grounded in the liberal principle that we should be held accountable for our choices, including our choice to emit greenhouse gasses. I have also argued that our interpretation of the ability to pay principle will depend on the strength of our aversion to inequality.

Combining the two principles

The United Nations Framework Convention on Climate Change suggests that we allocate responsibility for the costs of climate change on the basis of both 'differentiated responsibility' (unfair historic emitter pays principle) and 'respective capabilities' (ability to pay principle). In this section, I will critically consider three different ways that they might be combined.

Henry Shue has suggested that the unfair historic emitter pays principle and the ability to pay principle:

> Converge upon the same practical conclusion: whatever needs to be done by wealthy industrialized states or by poor non-industrialized states about global environmental problems like ozone destruction and global warming, the costs should initially be borne by the wealthy industrialized states (Shue 1999: 545).

The unfair historic emitter pays principle and the ability to pay principle have the same practical implication, namely, the rich developed states should pay the initial costs of climate change. We might call this the convergence thesis: 'common but differentiated responsibilities' endorses two principles that have convergent implications. The convergence thesis is consistent with two different readings of the United Nations Framework Convention on Climate Change. On the first reading, the convention adopts an 'overlapping consensus' approach: if some people accept the unfair historic emitter pays principle and others accept the ability to pay principle, they can all accept the same conclusions. The two principles independently justify the same allocation of responsibilities, which anyone who accepts either principle can endorse.

On the second reading, the UN convention adopts a 'cumulative arguments' approach: everyone should accept both the unfair historic emitter pays principle and the ability to pay principle and cumulatively these two principles offer a stronger justification than either one of them does independently for the conclusion that the developed states should pay the costs of climate change. I think we should reject the convergence thesis because the unfair historic emitter pays principle and the ability to pay principle only have convergent implications if we adopt a very simplified model of the world. Shue divides the world into two groups – developed and developing states. He uses the unfair historic emitter pays principle to distinguish between unfair historic emitters and fair historic emitters. He uses the ability to pay principle to distinguish between those with the ability to pay (i.e., above the threshold)

and those who do not have the ability to pay (below the threshold). He claims that the class of unfair historic emitters and the class of those with the ability to pay can both be mapped directly onto the class of developed states. Therefore, the two principles converge on the claim that developed states should pay the costs of climate change.

I think we might plausibly treat this as a rough approximation that can guide more careful and detailed moral thinking about how we should allocate responsibility.. However, an international climate agreement will need to allocate costs among developed states, therefore, we must go beyond Shue's simplified conception of the world and his simplified understanding of the implications of the unfair historic emitter pays principle and the ability to pay principle. It is very unlikely that any state's responsibility under the unfair historic emitter pays principle (understood in terms of proportionate responsibility for unfair historic emissions) will be exactly the same as their responsibility under the ability to pay principle (whatever thresholds and contribution rates we endorse).[viii] In short, the two principles do not converge on the same allocation of costs for those cases that are of most interest to us.

The unfair historic emitter pays principle and the ability to pay principle might be combined in a second way. Kate Raworth has proposed an 'Adaptation Financing Index', which 'gives equal weight to a country's responsibility and capability (50 per cent of the score each), and produces a broad indication of the share that each country should contribute to financing adaptation in developing countries' (Raworth 2007: 25). Raworth's combined principle might be applied to all of the costs of climate change (as opposed to only the costs of adaptation in developing countries). Her suggestion is that we should give equal weight to (versions of) the unfair historic emitter pays principle and the ability to pay principle in allocating the costs of climate change.

For example, Raworth's calculations suggest that the United States would be responsible for 51.4 percent of the costs of climate change under her version of the unfair historic emitter pays principle but only 36 percent of the costs of climate change under her version of the ability to pay principle. If the two principles are given equal weighting in determining the United States' overall responsibility, it should pay 43.7 percent of the costs of climate change. Let us call a hybrid principle of this general type a weighted combination principle.

I think there are two important problems with Raworth's weighted combination principle. First, the equal weighting of the unfair historic emitter pays principle and the ability to pay principle seems arbitrary. As Ed Page points out: '[The] authors provide no argument for their equal weighting of the two … elements. There is clearly some practical

convenience associated with this assumption, but it does not reflect any sound philosophical analysis' (Page 2008: 568).

Raworth's only defence of equal weighting lies in her commitment to 'simplicity':

> [The] value of an index lies in its ability to combine clear principles with relevant data in a systematic way, while ensuring that the complexity of the methodology is not greater than the quality of the data. We aim to make this index reflect the fundamental principles in as clear and simple a way as possible (Raworth 2007: 24-5).

Her claim is that we should avoid developing complex principles that require more sophisticated or more robust data (e.g. on emissions or wealth) than we have available. If the data is only indicative, the principles (and the index) can only provide a 'broad indication' of responsibility (Raworth 2007: 25). I think Raworth is right to draw attention to the difficulty of measuring unfair emissions and ability to pay. So, if there are good reasons for a weighted combination principle and there are no particularly strong reasons for something other than an equal weighting, we might accept Raworth's proposal on grounds of simplicity.

However, there is a more serious problem with such a principle. As Caney has noted, the unfair historic emitter pays principle and the ability to pay principle 'operate according to competing logics – one forward-looking and unconcerned with who created the problem and the other backward-looking in just those terms' (Caney 2009b: 12). It seems odd to combine the two principles in this way to determine who should pay the costs of climate change.

We can see this more clearly if we consider how we generally think about responsibility for the consequences of unjust, unfair or harmful action. If one person, A, has harmed another person, B, we generally believe that A is responsible for the harm she has caused and for paying the associated costs. We wouldn't also survey the wealth of everyone in the society to calculate each individual's ability to pay the costs and then adopt a formula for sharing responsibility between A, who caused the harm, and those other members of society who are most able to pay the costs of rectifying or compensating for the harm.

The agent who has committed the injustice has the primary duty (or responsibility) to make good the situation of the victim of the injustice. We only require other people to contribute to making good the situation of the victim when the agent who has committed the injustice can't (or won't and can't be made to) compensate the victim. In other words, we take the agent who has committed the injustice to be the primary duty-bearer and we take

other people with the ability to pay to be secondary duty-bearers. Raworth's weighted combination principle divides primary responsibility among the agents who have committed the injustice and those with the ability to pay, but this is not how we divide responsibility when we can identify agents who have committed an injustice.

This suggests a third way of combining the unfair historic emitter pays principle and the ability to pay principle. We might endorse the first as a principle for allocating primary duties for the costs of climate change and the second as a principle for allocating secondary duties. Let us call principles of this type two-stage, hybrid principles. At the first stage, we attribute responsibility for the costs of climate change to unfair historic emitters. At the second stage, we attribute responsibility for any costs that have not been paid by unfair historic emitters to those with the ability to pay. Caney has proposed a principle of this kind and has suggested four circumstances in which we might need to call on the secondary duty-bearers.

First, some unfair historic emitters were excusably ignorant about the consequences of their actions. Caney offers this statement of the objection:

> What if someone did not know that performing a certain activity (such as burning fossil fuels) was harmful? And suppose, furthermore, that there was no way in which they could have known that it was harmful. In such a situation their ignorance is excusable and it seems extremely harsh to make them pay for something that they could not have anticipated (Caney 2005: 761).

My actions might have caused harm but if I was excusably ignorant I should not have to pay the costs of solving the problem. As Caney points out, 'it is widely accepted that many who have caused greenhouse gas emissions were unaware of the effects of their activities on the earth's atmosphere' (Caney 2005: 761). Therefore, they should not be required to pay the costs of climate change.

Second, some unfair historic emitters are no longer alive. As Caney points out, 'much of the damage to the climate was caused by the policies of earlier generations: 'It is, for example, widely recognized that there have been high levels of carbon dioxide emissions for the last two hundred years, dating back to the Industrial Revolution in Western Europe' (Caney 2005: 756). Those who are dead cannot pay the costs associated with their unfair emissions.

Third, Caney suggests that the unfair historic emitter pays principle 'may be unfair on the impoverished' (Caney 2005: 763). Caney offers the following example:

> Consider, for example, a country that has in the recent past caused a great deal of pollution but that remains poor. … In this kind of situation the [unfair historic emitter pays] principle appears unfair, for it asks too much of the poor (Caney 205: 763).

This is unfair on the poor because it is too demanding. Therefore, poor unfair historic emitters should not be required to pay the costs of climate change.

Fourth, there may be some unfair historic emitters, who have been assigned primary responsibility for the costs of climate change, who simply 'fail to comply with their duties' (Caney 2005: 766). If we are 'unable to make them comply', we will have a situation in which they do not pay the costs associated with their unfair emissions (Caney 2005: 766).

Caney suggests that in all four cases the costs that are not paid by the primary duty-bearers – i.e., the unfair historic emitters – should be paid by those with the ability to pay. In general, I think Caney's strategy for combining the unfair historic emitter pays principle and the ability to pay principle is the right one – the unfair historic emitter pays principle must be the primary principle for allocating responsibility for the costs of climate change and the ability to pay principle must be a secondary or (as I will argue, in some cases) a tertiary principle for allocating the costs of climate change. However, I think there are some significant problems with the two-stage principle proposed by Caney. In the next section, I develop an alternative hybrid principle for allocating the costs of climate change through a critical discussion of Caney's principle.

Criticising Caney's hybrid principle

We might respond in three different ways to each of Caney's four cases. First, we might accept his claim that the secondary duty-bearers (i.e., those with the ability to pay) should be held responsible for the costs associated with the specified subset of unfair historic emissions. Second, we might reject his argument and maintain that the primary duty-bearers (i.e., the unfair historic emitters) should be held responsible for the costs associated with their emissions. Third, we might accept his argument that the primary duty-bearers should not or

cannot be held responsible for the costs associated with their unfair historic emissions but reject his claim that the costs should be borne by those with the ability to pay. Instead, we might propose an alternative principle for allocating the secondary duties associated with the specified subset of unfair historic emissions. This suggests that we might distinguish two parts of Caney's argument in each of the four cases: the negative claim that unfair historic emitters should not or cannot pay; and the positive claim that the costs should be paid by those with the ability to pay.

We might usefully divide Caney's four cases into two pairs. In two cases – the dead and the non-compliant – he suggests that some historic emitters *cannot* pay or are too powerful to be made to pay. In the other two cases – the excusably ignorant and the impoverished – he suggests that some historic emitters *should not* pay the costs of climate change. In the first two cases, we must accept Caney's negative claim that dead and non-compliant historic emitters *cannot* be made to pay the costs of climate change. We can only challenge his positive claim that the costs associated with their emissions should be paid by those with the ability to pay.

In the second two cases, there is a *prima facie* reason for requiring the unfair historic emitter to pay but Caney claims this is insufficient to justify requiring them to pay the costs of climate change. In these two cases, we might challenge either Caney's negative claim or his positive claim. In other words, we might argue that the excusably ignorant and the impoverished should pay the costs of climate change associated with their unfair historic emissions (challenging the negative claim) or we might agree that the excusably ignorant and the impoverished shouldn't pay but argue that the ability to pay principle is not the relevant principle for allocating secondary duties in these cases (challenging the positive claim).

We can begin by considering a challenge to the negative claim about the excusably ignorant. Shue suggests that 'the kind of wrong involved in exceeding one's fair share of allowable emissions has nothing to do with intention or foreseeability' (Shue 1994: 363). The supply of emissions-absorbing capacity is fixed by the safe threshold and cannot be increased – it is 'zero-sum' (Shue 1994: 364). Therefore, 'anyone's *excess encroaches* upon someone else's share' – it deprives them of something to which they are entitled and (probably) 'something they badly need' (Shue 1994: 364; original emphasis).[ix] It is important to note that the victim of this kind of injustice is someone deprived of their fair share of emission permits; not someone harmed by the effects of climate change.[x] Shue's claim is that by taking more than my fair share I have committed an injustice whether or not I knew what I was doing. I may not be morally culpable for my actions – and I may not deserve either blame or

punishment – but I still have a duty to rectify the injustice that I have committed (Shue 1999: 535-6).

Shue's challenge is unconvincing for two reasons. First, it concentrates on the situation of the person who doesn't get their fair share of emission permits. Shue is surely right that they should be compensated because they have not received what they were entitled to receive. However, he has not justified the claim that they must be compensated by excusably ignorant unfair historic emitters. Their compensation need not come in the form of a greater share of emission permits but might come in the form of other goods or resources that make an equivalent contribution to their fundamental interests or well-being. Therefore, it need not be provided by unfair historic emitters or in proportion to unfair historic emissions. Moreover, he has not shown that excusably ignorant unfair historic emitters should be held responsible for the costs of climate change – or even that they have committed an injustice against the victims of climate change.

Second, we saw earlier that underlying the unfair historic emitter pays principle was the liberal principle that individuals should be held accountable for their choices. However, an agent cannot make an informed choice if they are unaware of the consequences of their actions. Shue's challenge suggests that this is irrelevant but it seems excessively demanding to expect agents to bear full responsibility for the costs of harms or injustices that they cause unintentionally and unknowingly in an uncertain world.[xi] Excusably ignorant emitters may have acted unfairly but they have not acted unjustly because they did not act freely and should not be held responsible for their actions (Beckerman and Pasek 1995: 410). In summary, I have argued that we should accept Caney's negative claim that the excusably ignorant should not be held responsible for the costs associated with their unfair emissions.

I think Caney's negative argument that the impoverished should not have to pay the costs associated with their unfair historic emissions is more problematic. Caney imagines 'a country that has in the recent past caused a great deal of pollution but that remains poor' (Caney 2005: 761). In this case, he suggests that the unfair historic emitter pays principle 'asks too much of the poor' (Caney 2005: 763). There are two problems with this argument.

First, it does not distinguish between an agent who is responsible for their own poverty (e.g., because they have gambled away their wealth or because they have engaged in non-productive emissions generating activities) and an agent who is not responsible for their own poverty (e.g., because of injustices committed against them or because of the effects of a natural disaster). If the unfair historic emitter pays principle is grounded in the liberal principle that we should be held accountable for our choices, unfair historic emitters who are

responsible for their own poverty should be required to pay the costs of climate change associated with their unfair emissions.

Caney might suggest that there are some rights – e.g., the right to subsistence – which are inviolable and which even those who act unjustly cannot forfeit. I agree but I think this shows only that there may be some circumstances in which we have to wait for extremely poor unfair emitters to fulfil their duty to compensate the victims of climate change. In such circumstances, they have a duty to do whatever they legitimately can to improve their situation so that they can pay the costs associated with their unfair emissions. Of course, in the short term others may have a duty to (temporarily) cover the unpaid costs.

Second, Caney's argument does not show that unfair historic emitters who are not responsible for their own poverty should be exempt from the costs associated with their unfair historic emissions. Instead, they may be owed compensation for the injustices that they have suffered (or help to overcome a natural disaster) before they should be required to pay the costs associated with their unfair emissions. In other words, their duty does not disappear but rather is placed in abeyance until they are in a position to fulfil it. Again, others may need to act in the short term to temporarily cover the unpaid costs.

I have suggested that three of Caney's negative claims – regarding the dead, the non-compliant and the excusably ignorant – are convincing. However, I have suggested that poor unfair historic emitters – and, in particular, those responsible for their own poverty – should pay the costs of climate change (at least, in the longer term).

Caney's positive claim is that those with the ability to pay should pay when historic unfair emitters cannot be made to pay or should not pay. Is there an alternative principle to the ability to pay principle that we might use to allocate secondary duties?

The beneficiary pays principle suggests that the beneficiaries of emissions-generating activities should pay the costs of climate change:

> [The] current developed countries readily accept the benefits from past emissions in the form of their high standard of living and should therefore not be exempted from being held accountable for the detrimental side-effects with which their living standards were achieved (Neumayer 2000: 189).

If we accept the benefits of greenhouse gas-emitting activities, we should also accept the associated costs. There are two ways of interpreting the beneficiary pays principle.

On the first account, the beneficiary pays principle expresses the idea that free-riding is wrong. Gauthier defines a free-rider as someone who 'obtains a benefit without paying all or part of its cost' (1986: 96). The beneficiary of greenhouse gas emitting activities obtains the benefit without paying the externality costs of those activities. Someone else is left to pay the costs. This account depends on an '*action-specific* redistributive approach':

> The logic is akin to the rejection of arbitrariness present in egalitarian theories, but the scope is more restricted since it deals with benefits and harms that are causally related. They are derived from a single (set of) action(s) (Gosseries 2004: 50; original emphasis).

Benefiting from greenhouse gas emitting activities without paying the costs of climate change is wrong (or unjust) because it produces an inegalitarian distribution of the benefits and burdens. Benefits and burdens that are the consequence of the same set of actions should be shared equally among all of those affected by that set of actions.

This interpretation of the beneficiary pays principle is unconvincing because it is not at all clear why we should be *action-specific* egalitarians. Liberals are generally concerned about the unequal distribution of benefits and burdens because they believe that 'all disadvantages resulting from circumstances (natural events or involuntary human actions) that were imposed should be compensated' (Gosseries 2004: 49). In other words, they believe that agents should not be held responsible for their brute bad luck and that agents are not entitled to the benefits of their brute good luck (Dworkin 1981: 293). If our aim is to neutralise the effects of brute luck, we should adopt general egalitarian principles. We should not focus on the distribution of the benefits and burdens resulting from particular actions (or sets of actions). Instead, we should focus on the overall distribution of benefits and burdens.

Therefore, liberal egalitarians should not endorse this interpretation of the beneficiary pays principle. If they have to choose between action-specific redistribution (i.e., egalitarian redistribution of the benefits and burdens deriving from greenhouse gas emitting activities) and general redistribution (i.e., egalitarian redistribution of all benefits and burdens), they should choose general redistribution. They should endorse the ability to pay principle, which requires those with the most benefits overall (i.e., the wealthiest) to pay the costs of climate change, rather than the beneficiary pays principle.

There is a second interpretation of the beneficiary pays principle that offers a different account of why beneficiaries should pay the costs of climate change. On this interpretation,

beneficiaries should pay the costs of climate change because they have benefited from unjust – or rights-violating – actions. Unfair historic emitters have committed an injustice by emitting more than their fair share of emissions because their actions violate the rights of potential victims of climate change. We have no entitlement to wealth that has been acquired through unjust – or rights-violating – actions. Therefore, we have no entitlement to wealth that was created by someone emitting more than their fair share of emissions. This interpretation of the beneficiary pays principle is more attractive than the previous interpretation for two reasons.

First, it does not rely on action-specific egalitarianism. The claim is not that we must distribute the benefits and burdens derived from greenhouse gas emitting activities equally, but rather that the beneficiaries of emitting activities are not entitled to those benefits because they were produced unjustly. Second, this interpretation of the beneficiary pays principle is based on commonly accepted principles of just acquisition and transfer. If a benefit (or good) that has been acquired unjustly is voluntarily transferred to me by its current possessor, I am not entitled to it.

For example, if one person, A, steals a car from another person, B, and gives it to a third person, C, who is entirely innocent, C is not entitled to the car because A did not justly acquire the car and was not entitled to transfer ownership to C. Similarly, if one agent, A, acquires wealth (or, for example, the 'benefits of industrialisation') by emitting more than their fair share of emissions, A has 'stolen' from other agents who are unable to emit their fair share of emissions and has contributed to the violation of the rights of victims of climate change. Therefore, A did not justly acquire his wealth and is not entitled to transfer ownership of it or share it with other agents.

The 'unjust acquisition and transfer' interpretation of the beneficiary pays principle suggests that those who benefit from unjust emissions generating activities are not entitled to their unjustly acquired wealth. Therefore, we might legitimately require the beneficiaries of dead and non-compliant emitters to pay the costs of climate change associated with the original unjust emissions. The beneficiaries can be held liable – as secondary duty-bearers – for costs that the original wrongdoer (who has primary responsibility under the unfair historic emitter pays principle) can't pay or can't be made to pay.[xii]

The same cannot be said about the beneficiaries of excusably ignorant emitters. If we believe that the excusably ignorant unfair emitter did not act unjustly (because his action was not sufficiently informed to be considered a free action), his wealth is justly acquired and he

is entitled to transfer or share it. His beneficiaries should not be held liable for the costs of climate change because he was not liable for those costs.

Therefore, I would suggest that Caney is right to endorse the ability to pay principle as the most appropriate principle for allocating the costs of climate change associated with the unfair emissions of the excusably ignorant. However, he is wrong to suggest that this principle should be an all-purpose secondary principle for allocating the costs of climate change. The costs of climate change associated with the unfair emissions of the dead and non-compliant (assuming that they were not also excusably ignorant) should be paid by the beneficiaries of their unjust actions. Of course, if (some of) the beneficiaries of unjust emissions are themselves dead or non-compliant, we may need to resort to the ability to pay principle as a tertiary principle for the allocation of the costs of climate change.

Conclusion

Climate change should be approached as an issue of justice. The United Nations Framework Convention on Climate Change does adopt this approach and suggests an account both of human rights and duties. In this chapter, I have focussed on the principle proposed in the convention for allocating duties to pay the costs of climate change – namely, the principle of common but differentiated responsibilities and I have located my discussion in the recent literature in political philosophy on climate duties. I have proposed the following hybrid principle:

The unfair historic emitter pays principle: unfair historic emitters should pay the costs of climate change in proportion to their share of global unsafe emissions;

The excusable ignorance exception: excusably ignorant unfair historic emitters did not act unjustly because they were not responsible for their actions, therefore, they should not be held liable for the costs of climate change;

The 'unjust acquisition and transfer' interpretation of the beneficiary pays principle: the beneficiaries of dead and non-compliant unjust emitters should be held liable – as secondary duty-bearers – for the costs of climate change associated with the original unjust emissions;

The ability to pay principle: those with the ability to pay should pay any residual costs of climate change (specifically, the costs associated with the unfair emissions of the excusably

ignorant and the costs associated with unjust emissions where some or all of the beneficiaries of dead and non-compliant emitters are themselves dead or non-compliant).

I want to conclude with two comments on this hybrid principle. First, we should note that it is incompletely specified in several important respects. I have not offered an account of the fair distribution of emission rights, which is necessary for us to be able to determine when historic emissions have been unfair. I have not considered how we should determine when an agent can genuinely claim to have been excusably ignorant of the consequences of their emitting activities – and, therefore, not liable for the costs of climate change. I have not considered how the costs of climate change that fall to unjust beneficiaries of emitting activities should be shared among them. I have not offered an account of how the costs of climate change that fall to those with the ability to pay should be shared among them (e.g., should rates be steeply progressive?). In short, there is much more work to be done to develop a full theory of climate duties.

Second, it might be suggested that the proposed principle is impractical because it is too difficult to operationalize. How do we accurately determine (unfair) historic emissions? How do we determine whether emitters were excusably ignorant? How do we determine who benefited – and how much – from unjust emissions? This is an important challenge but I think we can offer two responses.

First, the proposed principle has some relatively clear implications. In particular, it rules out a number of proposals that have received attention in international politics. For example, it suggests that the developed nations cannot be held responsible for historic emissions in any period where they can reasonably claim excusable ignorance of the consequences of their greenhouse gas emitting activities. This should rule out some proposals for allocating the costs of climate change, including, for example, the Brazilian Proposal, which attributes responsibility based on emissions since 1840 (Brazilian Party at UNFCCC, 1997).

Similarly, it is likely to rule out any international agreement that requires the poor in developing nations to pay any of the costs of climate change in the near future. They have not emitted more than their fair share of historic emissions. They have not benefited from the unjust emissions of others. They are relatively less able to pay the costs of climate change. In sum, they are unlikely to be required to pay the costs of climate change by the unfair historic emitter pays principle, the beneficiary pays principle or the ability to pay principle, which collectively constitute the proposed hybrid principle. So, the developed nations will be required to pay the costs of climate change for some time to come.

Moreover, the proposed principle suggests that the largest share of the costs of climate change should be paid by those with high historic emissions in the relatively recent past (i.e., post-excusable ignorance) while any shortfall (due to death or non-compliance) should be paid by those who have benefited most from unjust emissions and, finally, by those who are wealthiest. This is likely to imply an allocation of responsibilities among developed nations that is quite different from the relatively undifferentiated approach adopted in the Kyoto Protocol, which reflected political compromise more than judgements of justice.

We might also offer a second response. The problems of operationalizing the proposed principle may be exaggerated. We would need to agree how we should approximately measure the key determinants of our climate duties. We expect this to be difficult. However, I think this expectation is grounded in a realist understanding of international relations. In other words, we expect it to be difficult to operationalize mainly because we expect different agents to seek to promote an operationalization that is in their own interests.

If we believe that the proposed principle is the correct principle of climate justice, we should not abandon it just because some self-interested agents oppose it or are likely to argue about how it should be operationalized. Instead, we should seek to develop and defend plausible ways of operationalizing the proposed principle in research projects that encourage normative political philosophers to work with social and natural scientists.

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[i] See IPCC (2007: 33).

[ii] Caney uses the term 'hybrid' to label his own principle (2005: 769). I use the term more generally to refer to principles that are pluralistic (i.e., combine more than one pure principle).

[iii] There are interesting discussions of rights and climate change in Caney (2006a), Caney (2008), Caney (2009c), Hayward (2007), Vanderheiden (2008: 240-42) and Bell (2004). See also Hayward (2005) for a more general discussion of environmental rights.

[iv] As Page notes, equal weight for all historic emissions is only one of 'various ways of assessing the impact of [an agent's] cumulative emissions on the climate system' (Page 2008: 558).

[v] See, for example, Caney (2005: 765), Shue (1994: 362-4) and Raworth (2007: 24).

[vi] See also Hayward (2007: 439-44) and Beckerman and Pasek (1995: 409).

[vii] A very similar argument is made by Hayward (2007: 441).

[viii] This is clear in Raworth's attempt to operationalize versions of the two principles, which I discuss below (Raworth 2007: 28). For example, on Raworth's account, the USA is responsible for 51.4 percent of the costs of climate change under one principle but only 36 percent under the other.

[ix] Gardiner and Neumayer make similar arguments (Gardiner 2004: 581; Neumayer 2000: 188).

[x] It is interesting that Shue focuses on the injustice to other emitters rather than victims of climate change in this context. Gardiner rejects excusable ignorance as an excuse in relation to the costs of preventing or compensating for the harms of climate change (Gardiner 2004: 581). However, his argument is very brief and does not offer a clear justification for holding the excusably ignorant responsible for the costs of climate change.

[xi] Caney makes a related argument from 'demandingness' (Caney 2005: 762).

[xii] Caney considers this view and argues that it is 'problematic, in part, because it is sometimes difficult to identify the relevant duty-bearers' (Caney 2006b, 477). I address this objection (albeit briefly) in the final section of this paper when I consider whether we can operationalize my proposed principle.

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